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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/199,669	11/25/1998	ADNAN SHENNIB	ISM/005	3957

7590

02/02/2004

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EXAMINER

HARVEY, DIONNE

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 02/02/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/199,669

Applicant(s)

SHENNIB ET AL.

Examiner

Dionne N Harvey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-97 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-97 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,46-48,50 and 94-96 are rejected under 35 U.S.C. 102(b) as being anticipated by Shennib (US 5,701,348).

Regarding claims 1 and 50, in figure 3, Shennib teaches a hearing device adapted to be inserted entirely within the wearer's ear canal past the aperture for long term use therein, comprising: a sealing retainer (40) seated within the bony region of the ear canal along it's longitudinal axis and in direct contact with the walls thereof; a receiver assembly (41) including a receiver and being arranged to mate with said retainer for positioning in the bony portion of the ear canal; a microphone assembly (12) including a microphone; a battery assembly (15) including a battery ; and with regard to claim 1, Shennib further teaches a flexible connector (51) electrically and mechanically connecting said battery assembly, receiver assembly and microphone assembly such that the microphone assembly is flexibly supported in the ear canal and will be non-occluding therein with minimal or no contact with the walls of the ear canal.

Regarding claim 2, Shennib teaches that the battery assembly includes a thin enclosure (see opening element shown in figure 3) substantially conforming to the shape of the battery and enclosing and supporting the battery therein.

Regarding claims 46 and 94, Shennib appears to teach that the battery is a button cell type battery.

Regarding claims 47, 48, 95 and 96, Shennib teaches that the battery is removable from said thin enclosure (shown in figure 3) for disposal when battery replacement is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-6,8-10,15,23,29,30-37,39,40,42-44,49-54,56-58,63,71,77-85,87,88,90-92 and 97 are rejected under 35 U.S.C. 102(e) as being anticipated by Fletcher (US 6,212,283).

Regarding claims 1 and 50, in figures 3 and 4, Fletcher teaches a hearing device adapted to be inserted entirely within the wearer's ear canal past the aperture for long term use therein, comprising: a sealing retainer (53) seated within the bony region of the ear canal along its longitudinal axis and in direct contact with the walls thereof; a receiver assembly (51) including a receiver and being arranged to mate with said retainer for positioning in the bony portion of the ear canal; a microphone assembly (43) including a microphone; a battery assembly (42) including a battery ; and with regard to claim 1, Fletcher further teaches a flexible connector (52) electrically and mechanically connecting said battery assembly, receiver assembly and microphone assembly such that the microphone assembly is flexibly supported in the ear canal and will be non-occluding therein (18) with minimal or no contact with the walls of the ear canal.

Regarding claims 2 and 51, Fletcher teaches that the battery assembly includes a thin enclosure (41) substantially conforming to the shape of the battery and enclosing and supporting the battery therein.

Regarding claim 3, Fletcher teaches that the sealing retainer is sufficiently soft and yielding so as to conform to the shape of the ear canal for long term retention.

Regarding claims 4 and 52, Fletcher teaches that the sealing retainer comprises an air cavity to accept element 51 of the core assembly.

Regarding claims 5 and 53, Fletcher teaches a respective thin enclosure (40,12) encapsulating the receiver and microphone.

Regarding claims 6 and 54, Fletcher teaches moisture proof encapsulation (41,48, 51) of said device.

Regarding claims 8 and 56, in figure 13, Fletcher teaches that the transducer means includes a microphone (43) and receiver (54) each having a port, a further including at least one debris guard (87) for at least the microphone port or receiver port.

Regarding claim 9 and 57, Fletcher teaches that the debris guard is moisture proof.

Regarding claims 10 and 58, Fletcher teaches that the debris guard is acoustically transparent.

Regarding claims 15 and 63, Fletcher teaches that the support of the microphone assembly via flexible connection (52) enables the movement of the microphone (at least at the right-most end) from pressures collected in the ear canal such as debris and canal deformations.

Regarding claims 23 and 71, Fletcher teaches signal processing circuitry (44) which includes an amplifier, as is well understood in the art.

Regarding claims 29,31,77 and 79, in figures 16 and 17, Fletcher teaches manually adjustable control means and programming means.

Regarding claims 30 and 78, absent the provision of distinguishing structural limitations in the Applicant's specification and/or drawings, Fletcher as interpreted as teaching the electrical jumper, as claimed.

Regarding claims 32 and 80, in column 8, lines 51-70, Fletcher teaches an external programmer and adjustment means.

Regarding claims 33 and 81, Fletcher teaches electrical cable (82) for said programmer.

Regarding claims 34,35,82 and 83, In column 8, lines 48-50, Fletcher teaches remote programming consisting of sound, via wireless link such as radio frequency.

Regarding claims 36 and 84, Fletcher teaches performing in-situ measurements (see column 8, lines 51-70).

Regarding claims 37 and 85, Fletcher teaches that the sealing retainer is made of compressible material.

Regarding claims 39,40,87 and 88, Fletcher teaches that the sealing retainer is made of polyurethane foam, silicone or like material, as broadly claimed.

Regarding claims 42 and 90, Fletcher teach that said cavity in the sealing retainer is positioned coaxially with an axis of the ear canal in the bony portion thereof, to support the receiver assembly along said longitudinal axis.

Regarding claims 43 and 91, Fletcher teaches that the cavity is medially shaped to conform at least partially to said battery assembly for acceptance thereof.

Regarding claims 44 and 92, Fletcher teaches that the sealing retainer is fully seated in the bony portion of the ear canal and conforms itself to the walls thereof, also providing acoustic sealing for preventing acoustic signals emanating from the receiver from feeding back to the microphone.

Regarding claims 49 and 97, in figure 3, Fletcher teaches that the forward portion of the receiver (54) protrudes medially beyond the sealing retainer(53).

1. Claims 7,13,14,18-22,27,28,55,61,62,66-70 and 75 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher (US 6,212,283).

Regarding claims 7 and 55, Fletcher does not clearly teach that the encapsulation has a wall thickness not to exceed .3 mm. However, it would have been obvious for one of ordinary skill in the art at the time of the invention to provide moisture protection not exceeding a maximum thickness, so as not to prevent the device from being comfortably accommodated within the limited confines of the wearer's auditory canal.

Regarding claims 13,14,61 and 62, Fletcher does not specifically teach the use of an adhesive pad with the debris guard or the use of a removable debris guard. However, as evidenced by the claims, it would have been obvious for one of ordinary skill in the art at the time of the invention to permanently or removable mount the debris guard with the hearing device, depending upon the length of time the hearing device is wearable within the ear canal i.e., a short term disposable use device would incorporate and adhesively mounted debris guard etc.

Regarding claims 18-22 and 66-70, Fletcher does not teach the use of a reed-switch coupled to the device for magnetically induced power switching or control of the device. However, it would have been obvious for one of ordinary skill in the art at the

time of the invention to employ the use of a reed-switch, since said switch is usable to control device circuitry and may be used to adjust operational parameters in the device such as volume. (see NEWTON reference, cited below).

Regarding claims 27,28,75 and 76, Fletcher does not specifically teaches the use of conductive pads or a crossing section for connecting the flexible conductor to the battery. However, the Examiner takes Official Notice that employing a variety of structures for electrical terminals are well known in the art and it would have been obvious to use any of these structure such as contact pads or crossing sections, as a means for connecting the power supply to the hearing device circuitry components. (see KOGEL reference, cited below).

2. Claims 24-26 and 72-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher (US 6,212,283) in view of Sciarra (US 4,539,440).

Regarding claims 24 and 72, Fletcher does not specifically teach that the flexible connector comprises a thin film circuit. Sciarra teaches that a thin film circuit may be employed for connecting hearing device circuitry and further teaches that said thin film circuit provides a flexible means of attachment. It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Fletcher and Sciarra, thereby providing a flexible means for attaching the main assembly and receiver assembly.

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Regarding claims 25 and 73, The combination of Fletcher and Sciarra teach a thin film circuit comprising different sections for association with the various assemblies of the hearing device,

Regarding claims 26 and 74, Fletcher teaches that the medial and lateral sections are bendable with respect to the main section.

3. Claims 11,12,16,17,38,41,45,59,60,64,65,86,89 and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher (US 6,212,283) in view of Garcia (US 5,743,692).

Regarding claims 45 and 93, Fletcher does not clearly teach that the sealing retainer is one among an assortment of different sizes. In column 6, lines 26-29, Garcia teaches a sealing retainer (30) which is selectable in different sizes and shapes.

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Fletcher and Garcia, thereby providing a selectively sizeable sealing retainer so as to comfortably fit in the ears of wearers having different ear canal sizes.

Regarding claims 11 and 59, in figure 1, Garcia teaches a debris guard(32) which comprises a replaceable cap, as broadly claimed, and may be replaced via bayonet coupling (col.7, lines 5-7).

Regarding claims 12 and 60, in figure 3, Garcia appears to teach that the debris guard comprises a body member and guard member.

Regarding claim 16,17,64 and 65 Garcia teaches that the core assembly may be constructed to comprise an air vent (17).

Regarding claims 38 and 86, Garcia teaches that the sealing retainer is compressible, providing a delayed expansion to assume a snug fit.

Regarding claims 41 and 89, Garcia teaches that the sealing retainer (30) is removable and disposable.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Koegel (US 6,595,796) teaches a flexible circuit for attachment to electrical contact pads.

Newton (US 5,659,621) teaches reed-switch use in a hearing device.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Harvey whose telephone number is (703) 305-

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1111. The examiner can normally be reached on Monday through Friday from 8:30am to 6:00pm.

Any responses to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

or faxed to:

(703) 308-6306, for formal communications for entry

Or:

(703) 308-6296, for informal or draft communications, please label "PROPOSED" or "DRAFT".


Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor(Receptionist)

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached at (703) 305-4708.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Harvey whose telephone number is (703) 305-1111.

D.H.

January 26, 2004


HUYEN LE
PRIMARY EXAMINER